

REMARKS

Claims 6-10 and 17-21 are pending in this application. Claims 6-10 and 17-20 are amended.

Applicant would like to thank the Examiner for the courtesy extended during the telephonic interview on October 10, 2007. During the interview, the Examiner and applicant's representatives discussed applicant's techniques and the primary cited reference, Atkins, in addition to discussing proposed claim amendments to overcome the cited references. Applicant's representatives indicated that applicant would submit the claim amendments and remarks in response to the non-final Office Action.

The Examiner has rejected claims 6-10 under 35 U.S.C. § 112. Without conceding the merits of this rejection, applicant has amended independent claim 6 to address the Examiner's concern. In particular, claim 6 has been amended to recite "when a deepest non-leaf node is found along the unsearched path ...," "when the deepest non-leaf node has a non-leaf sibling node ...," and "when the parent node of the deepest non-leaf node is not the root node" Applicant respectfully requests that this rejection be withdrawn.

The Examiner has rejected claims 6-10 and 17-21 under 35 U.S.C. § 103(a) over Atkins and Rogers. Applicant respectfully traverses these rejections.

Applicant's techniques are directed to providing a compact layout of connected nodes. A layout of connected nodes, such as a hierarchical (e.g., tree) structure in which nodes are connected by edges or branches, may have dimensions that cannot be conveniently viewed or printed. For example, the width of the layout may be much larger than the height. Applicant's techniques arrange the connected nodes into a compact layout, such that the overall width and height of the layout are more proportional and can be conveniently viewed or printed. For example, applicant's techniques may minimize the difference between the width and height of the layout, or may optimize the ratio between

the width and height of the layout toward a preferred aspect ratio. Applicant's techniques render the compact layout of connected nodes, depicting each of the arranged nodes and the edge (or branch) between each pair of connected nodes.

Atkins is directed to automatically generating a photo album page layout. Atkins places images on a page in a manner that minimizes the amount of empty space on the page, while at the same time refrains from cropping (i.e., altering the aspect ratio of) the images. Atkins may prepare multiple page layouts. A tree structure is used to generate each of the page layouts. A page may be divided sequentially to create multiple locations on the page where images may be placed. Each division of the page corresponds to a node in the corresponding tree. Each leaf node in the tree corresponds to an image to be used in the page layout. Atkins may generate multiple layouts based on the desires of the user and the images presented, along with a score for each layout. Atkins outputs the layout with the most desirable score.

As amended, claims 6-10 recite "rendering the positioned nodes ... on an output device, wherein rendering includes depicting each of the positioned nodes and the edge between each pair of connected nodes." As amended, claims 17-21 recite "rendering the arranged nodes ... on an output device, wherein rendering includes depicting each of the arranged nodes and the branch between each pair of connected nodes." For example, applicant's techniques may render a hierarchical structure such as that depicted in Figure 5. Neither of the applied references discloses or suggests "rendering the positioned [or arranged] nodes ... on an output device, wherein rendering includes depicting each of the positioned [or arranged] nodes and the edge [or branch] between each pair of connected nodes." While Atkins may use a tree structure to generate a page layout, what is rendered is the page layout of images, rather than the tree structure. Atkins renders the page layout using images corresponding to leaf nodes in the tree structure, rather than "depicting each of the positioned [or arranged] nodes and the edge [or branch] between each pair of connected nodes" as in applicant's techniques. Applicant can find nothing in Atkins that discloses or suggests "rendering the positioned [or arranged] nodes ... on an output

device, wherein rendering includes depicting each of the positioned [or arranged] nodes and the edge [or branch] between each pair of connected nodes."

Claims 6-10 recite positioning nodes "wherein the difference between the width and height of the ... layout is minimized." Neither of the cited references discloses or suggests positioning nodes "wherein the difference between the width and height of the ... layout is minimized." The Examiner cites Atkins at paragraph [0057] as corresponding to "an efficient (e.g., minimized, or compact) layout." (Office Action, July 13, 2007, p. 4.) This portion of Atkins describes that a bounding box may be determined for each of the images in the page layout, each image represented by a node in a tree structure. A bounding box is an area of space that bounds the image, as well as any associated caption or other material, in the page layout. A bounding box, however, may have any dimensions. Atkins does not describe minimizing "the difference between the width and height" of a bounding box. Furthermore, as described above, Atkins "layout" is a page layout of images, rather than a layout of nodes and edges or branches (e.g., a hierarchical structure) as in applicant's techniques. The cited portion of Atkins does not disclose or suggest positioning nodes "wherein the difference between the width and height of the ... layout is minimized" as recited.

The Examiner also cites Atkins "brick layout," in which no white space exists between images in a page layout. However, such a layout minimizes the space between images in the layout, rather than the minimizing "the difference between the width and height of the ... layout" as in applicant's techniques. Moreover, the "brick layout," like Atkins' other layouts, is a page layout of images, rather than a layout of nodes and edges or branches (e.g., a hierarchical structure) as in applicant's techniques. The cited portion of Atkins does not disclose or suggest positioning nodes "wherein the difference between the width and height of the ... layout is minimized" as recited, nor can applicant find anything in Atkins that discloses this recited feature.

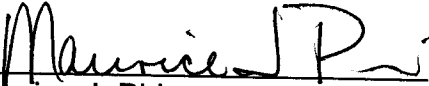
Claims 17-21 recite arranging nodes "wherein the ratio between the width and the height of the ... layout is optimized toward a ... preferred aspect ratio." Neither of the cited references discloses or suggests arranging nodes "wherein the ratio between the width and the height of the ... layout is optimized toward a ... preferred aspect ratio." The Examiner does not cite any portion of Atkins as corresponding to this recited feature, and instead rejects the claims for reasons similar to the rejections of claims 6-10. The Examiner does, however, cite Atkins' "aspect ratio" in regard to dependent claim 18. (Office Action, July 13, 2007, p. 6.) Atkins describes that each image has an associated aspect ratio, or a ratio of image height to image width. One of Atkins' objects is to assign images to a predefined layout space while maintaining the aspect ratios associated with the images. However, applicant can find nothing in Atkins that discloses or suggests "optimiz[ing]" an aspect ratio "toward a ... preferred aspect ratio." Even if Atkins were to disclose such optimizing, Atkins "layout" is a page layout of images, rather than a layout of nodes and edges or branches (e.g., a hierarchical structure) as in applicant's techniques, as described above. Atkins does not disclose or suggest "wherein the ratio between the width and the height of the ... layout is optimized toward a ... preferred aspect ratio" as recited.

Based upon the above amendments, applicant respectfully requests reconsideration of the application and its early allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0665, under Order No. 418268831US from which the undersigned is authorized to draw.

Dated: 10/15/07

Respectfully submitted,

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